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**EXAMINING INTELLECTUAL CAPITAL,
ORGANIZATIONAL LEARNING, ENTREPRENEURIAL
ORIENTATION TOWARDS SMEs' INNOVATIVE
PERFORMANCE IN JORDAN**



MOHD ABDAL KARIM HUSSIEN ALZUOD

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By

MOHD ABDAL KARIM HUSSIEN ALZUOD



UUM
Universiti Utara Malaysia

**Thesis Submitted to
School of Business Management
Universiti Utara Malaysia
In Fulfillment of the Requirement for the Doctor of Philosophy**

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Abstract

Innovative performance as a key asset is fundamental to building the competitive advantage of SMEs. This study examines empirically the direct relationship between intellectual capital, organizational learning and innovative performance amongst SMEs in Jordan. It also examines the moderating effect of entrepreneurial orientation on the relationship between intellectual capital, organizational learning and innovative performance. A total of 600 questionnaires were personally distributed to managers / owners of SMEs from three cities in Jordan (Amman, Irbid and Zarqa). Out of 600 questionnaires distributed, only 325 questionnaires were returned and usable for further analysis, representing a response rate of 54.1%. PLS SEM technique had been applied to analyses the data. The findings showed that intellectual capital (human capital and customer capital dimensions) were found positively and significantly related to innovative performance. The findings also revealed that organizational learning (information acquisition, information distribution and organizational memory) were found positively and significantly related to innovative performance. In addition, the results revealed that supports the effect of entrepreneurial orientation that moderate in relationship between intellectual capital (customer capital, but not human capital and structural capital) and innovative performance, meanwhile entrepreneurial orientation that not supported as moderator in relationship between organizational learning dimensions and innovative performance. This study contributes to enriching the body of knowledge on literature of intellectual capital, organizational learning and innovative performance within SMEs context. Based on the theoretical gaps, this study contribute by extending the body of knowledge by adding entrepreneurial orientation as moderator which other studies neglected to consider. The present study also provides SMEs managers with an empirical evidence that possessing strong intellectual capital, organizational learning and entrepreneurial orientation in its dimensions seem to help SMEs reinforce their ability to generate innovative performance. Potential limitations and directions for future research are also discussed.

Keywords: Innovative Performance; Intellectual Capital; Organizational Learning; Entrepreneurial Orientation; SMEs; Jordan

Abstrak

Prestasi inovatif sebagai aset utama merupakan asas kepada pembinaan kelebihan daya saing Perusahaan Kecil dan Sederhana (PKS). Kajian ini meneliti secara empirikal hubungan langsung antara modal intelek, pembelajaran organisasi dan prestasi inovatif. Kajian ini juga mengkaji kesan penyerderhana orientasi keusahawanan kepada hubungan antara modal intelek, pembelajaran organisasi dan prestasi inovatif. Sebanyak 600 soal selidik telah diedarkan secara peribadi kepada pengurus / pemilik PKS daripada tiga bandar di Jordan (Amman, Irbid dan Zarqa). Daripada 600 soal selidik diedarkan, hanya 325 soal selidik telah dikembalikan dan boleh digunakan untuk analisis seterusnya, mewakili kadar respons sebanyak 54.1% kadar maklum balas. Kaedah PLS-SEM telah digunakan untuk menganalisis data. Hasil kajian menunjukkan modal intelek (modal insan dan dimensi modal pelanggan) adalah positif dan berkaitan secara signifikan dengan prestasi inovatif. Hasil kajian juga menunjukkan pembelajaran organisasi (pemerolehan maklumat, pengedaran maklumat dan memori organisasi) adalah positif dan berkaitan secara signifikan dengan prestasi inovatif. Di samping itu, hasil kajian menunjukkan sokongan terhadap kesan orientasi keusahawanan yang menyederhanakan hubungan antara modal intelek (modal pelanggan, tetapi bukan modal insan dan modal struktur) dan prestasi inovatif, manakala orientasi keusahawanan tidak disokong sebagai penyerdahana dalam hubungan antara dimensi pembelajaran organisasi dan prestasi inovatif. Kajian ini menyumbang untuk memperkayakan lagi kandungan ilmu pengetahuan literatur modal intelek, pembelajaran organisasi dan prestasi inovatif dalam konteks PKS. Berdasarkan jurang teori, kajian ini menyumbang kepada ilmu pengetahuan dengan penambahan orientasi keusahawanan sebagai penyerdahana yang sering diabaikan kajian lain. Kajian masa kini juga memberikan bukti empirical kepada pengurus PKS bahawa dengan mempunyai modal intelek yang kuat, pembelajaran organisasi dan orientasi keusahawanan dalam dimensinya dapat membantu memperkukuhkan keupayaan PKS untuk menghasilkan prestasi inovatif. Potensi, batasan kajian dan arah tuju untuk kajian akan datang juga dibincangkan.

Kata Kunci: Prestasi inovatif, Modal intelek, Pembelajaran Organisasi, Orientasi Keusahawanan, PKS, Jordan

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Table of Content

Permission to Use	i
Abstract	ii
Abstrak	iii
Acknowledgement	iv
Table of Content	v
List of Tables	ix
List of Figures	xi
CHAPTER ONE INTRODUCTION	1
1.1 Background of Study	1
1.2 Problem Statement	3
1.3 Research Questions	12
1.4 Research Objectives	13
1.5 Significance of the Study	13
1.6 Scope of the Study	14
1.7 Definition of Key Terms	15
1.8 Organization of Chapters	16
CHAPTER TWO LITERATURE REVIEW	18
2.1 Introduction	18
2.2 Concept of Innovative Performance	18
2.2.1 Dimensions of Innovative Performance	21
2.2.2 Previous studies on Innovative Performance	23
2.3 Concept of Intellectual Capital	33
2.3.1 Dimensions of Intellectual Capital	35
2.3.2 Previous studies on Intellectual Capital	43
2.4 Concept of Organizational Learning	50
2.4.1 Dimensions of Organizational Learning	52
2.4.2 Previous studies on Organizational Learning	57
2.5 Concept of Entrepreneurial Orientation	62
2.5.1 Dimensions of Entrepreneurial Orientation	65
2.5.2 Previous studies on Entrepreneurial Orientation	68
2.5.3 Entrepreneurial Orientation as Moderating Variable	70
2.6 Conclusions and Research Issues to be Addressed	73

2.7	Underpinning Theory	75
2.7.1	Resource-based View Theory (RBV)	75
2.7.2	Dynamics Capabilities Theory.....	78
2.7.3	The Schumpeter Theory.....	80
2.7.4	Contingency Theory.....	81
2.8	Research Framework.....	83
2.9	Development of Hypotheses	86
2.9.1	Relationship between Intellectual Capital and Innovative Performance 86	
2.9.2	Relationship between Organizational Learning and Innovative Performance.....	88
2.9.3	Entrepreneurial Orientation as a Moderator in the Relationship between Intellectual Capital and Innovative Performance	89
2.9.4	Entrepreneurial Orientation as a Moderator in the Relationship between Organizational Learning and Innovative Performance.....	91
2.10	Conclusion.....	91
CHAPTER THREE METHOD		93
3.1	Introduction	93
3.2	Research Design.....	93
3.3	Population and Sampling	94
3.3.1	Study Population.....	94
3.3.2	Sampling Size	96
3.3.3	Sampling Technique	96
3.4	Operational Definitions and Measurements	97
3.4.1	Innovative Performance	98
3.4.2	Intellectual Capital	99
3.4.3	Organizational learning.....	103
3.4.4	Entrepreneurial Orientation	108
3.5	Questionnaire Design	110
3.6	Data Collection Procedure	112
3.7	Data Analysis	114
3.8	Conclusion.....	115
CHAPTER FOUR FINDINGS		116
4.1	Introduction	116

4.2	Response Rate	116
4.3	Non-Response Bias	117
4.4	Common Method Variance Test	119
4.5	Demographic Characteristics of the Participants	121
4.6	Data Screening and Preliminary Analysis.....	122
4.6.1	Missing Values.....	123
4.6.2	Outliers.....	123
4.6.3	Normality Test	124
4.6.4	Linearity and Homoscedasticity	125
4.6.5	Multicollinearity	126
4.6.6	Descriptive Analysis of the Latent Constructs.....	127
4.7	Evaluation of the Model Quality.....	128
4.7.1	Measurement Model	131
4.7.2	Structural Model	148
4.8	Summary of Findings	161
4.9	Conclusion.....	164
CHAPTER FIVE DISCUSSION.....		165
5.1	Introduction	165
5.2	Summary of the Findings	165
5.3	Discussions.....	166
5.4	Intellectual Capital and Innovative Performance	166
5.3	Organizational Learning and Innovative Performance	169
5.4	Entrepreneurial Orientation as a Moderator in the Relationships between Intellectual Capital and Innovative Performance	172
5.5	Entrepreneurial Orientation as a Moderator in the Relationships between Organizational Learning and Innovative Performance	176
5.6	Research Implications	178
5.6.1	Theoretical Implications	178
5.6.2	Practical Implications.....	179
5.7	Limitations and Recommendations for Future Research	182
5.8	Conclusions	183
REFERENCES		185
APPENDIX A – OVERVIEW OF SMEs IN JORDAN.....		212

APPENDIX B – CERTIFICATION OF AUTHORIZED TRANSLATION OFFICE	220
APPENDIX C - QUESTIONNAIRE.....	221
APPENDIX D- THE ARABIC VERSION OF QUESTIONNAIRE	232
APPENDIX E1 - SPSS OUTPUT	242
APPENDIX E2-TEST OF NON-RESPONDENT BIAS	264
APPENDIX E3 – OUTLIERS TEST	267
APPENDIX E4 - NORMALITY TEST	268
APPENDIX E5 – LINEARITY TEST	278
APPENDIX E6- MULTICOLLINEARITY ASSESSMENT OF TOLERANCE AND VIF VALUES	279
APPENDIX F- PRE-TEST EXPERTS.....	280



List of Tables

Table 1.1 <i>The global innovation index rankings (2014-2016)</i>	4
Table 2.1 <i>Summary of past studies</i>	25
Table 3.1 <i>Number of SMEs in operation for more than 3 years in the three cities</i>	95
Table 3.2 <i>Distribution of SMEs for each city</i>	97
Table 3.3 <i>Original and adapted versions of innovative performance items</i>	98
Table 3.4 <i>Innovative performance items</i>	99
Table 3.5 <i>Original and adapted versions of intellectual capital items</i>	100
Table 3.6 <i>Intellectual capital items</i>	102
Table 3.7 <i>Original and adapted versions of organizational learning items</i>	104
Table 3.8 <i>Organizational learning items</i>	106
Table 3.9 <i>Original and adapted versions of entrepreneurial orientation items</i>	109
Table 3.10 <i>Entrepreneurial orientation items</i>	110
Table 3.11 <i>The cronbach alpha for each research measures from the pilot study (n = 30)</i>	112
Table 4.1 <i>Respondents' response rate of Jordanian Studies related to SMEs</i>	117
Table 4.2 <i>Respondents' response rate</i>	117
Table 4.3 <i>Test of non-response bias</i>	119
Table 4.4 <i>Profile of the responding SMEs (n=325)</i>	121
Table 4.5 <i>Descriptive statistics for latent variables</i>	127
Table 4.6 <i>Loadings and cross loadings (before deletion)</i>	132
Table 4.7 <i>Loadings and cross loadings (after deletion)</i>	137
Table 4.8 <i>Results of measurement model – Convergent validity</i>	143
Table 4.9 <i>Correlations among constructs and discriminant validity</i>	146
Table 4.10 <i>Composite reliabilities of constructs</i>	147
Table 4.11 <i>Structural model assessment (direct relationship)</i>	149
Table 4.12 <i>Structural model with moderating relationship</i>	152
Table 4.13 <i>Variance explained in the endogenous latent variables</i>	155
Table 4.14 <i>Effect sizes of the latent variables</i>	156
Table 4.15 <i>Strength of the moderating effects</i>	158
Table 4.16 <i>Construct cross-validated redundancy</i>	160
Table 4.17 <i>Summary of Hypotheses Testing</i>	161

Table 4.18 *Descending order the most influential of the intellectual capital and organizational learning dimensions to innovative performance* 163



List of Figures

<i>Figure 1.1.</i> The innovation of SME in Jordan and FEMIP	2
<i>Figure 2.1.</i> Research Framework	86
<i>Figure 4.1.</i> Measurement model and structural model	129
<i>Figure 4.2.</i> Original study model	130
<i>Figure 4.3.</i> Construct validity for study model	141
<i>Figure 4.4.</i> Structural model (direct relationship)	150
<i>Figure 4.5.</i> Structural model with moderating relationship	153
<i>Figure 4.6.</i> Plot of interaction between customer capital and entrepreneurial orientation on innovative performance	154
<i>Figure 4.7.</i> Construct cross-validated redundancy	161



CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Innovation has been considered to be among the top sources of sustainable competitive advantage, as it brings improvements in new products and process, as well as contributes to performance value (Delgado, 2011). Innovation refers to a process where the organization creates and clarifies problems and then exerts effort to develop novel knowledge for its solution. Organization that can provides the most sought out product/services will survive and thrive in the market and will possess the biggest portion of the market share. Therefore, organizations are in need of creating innovative performance to direct them to create new products and services and enhancing the quality of their goods and services as well as acquiring an organizational structure that meets the requirements of competitive environment (Khalili, Nejadhussein & Fazel, 2013; 2013; Riani, 2013).

Though innovative performance is a significant aspect to increase and maintain competitive advantage, to continuously being innovative possess challenges for most organizations especially for the SMEs. Some may lack of resources, leadership and inadequate funding to be innovative, while some may lack of systematic innovation process and incentive to innovate and lack of support from the management.

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APPENDIX A – OVERVIEW OF SMEs IN JORDAN

In Jordan, SMEs significantly contributes to the economy and they are deemed to complement large projects, particularly in the industrial sector. The importance of SMEs in Jordan likes in their increased growth compared to their larger counterparts (World Bank, 2013). Jordanian SMEs also absorb a great proportion of the workforce and unemployment to bring about a balanced growth in the country owing to its extensive distribution and limited resources (Ministry of Industry, Trade and Supply, 2014a).

However, there has been no consensus as to a universal definition of Small and Medium Enterprises, aside from the generally acknowledged traits including the number of employees in the firm that should be under 100 employees or 250 employees, limited levels of revenues and assets. According to the Multilateral Investment Guarantee Agency Report (MIGA, 2014), categorized SMEs under organizations that have not more than 300 employees, and owning lower than U.S.\$15 million in assets, and profiting lower than U.S.\$15 million yearly (World Bank, 2014). It is notable that the definition accommodates factors like the number of employees, capital and revenues that identifies whether or not the firm is an SME. The premise behind the definition is to enable industries dissimilarity. For instance, a firm that manufactures garments may employ a significant number of employees but its revenues may be lower than an R&D firm that employs fewer employees (Young Entrepreneur's Association, 2011).

In the context of the MENA region (Middle East and North Africa), SMEs differ throughout the region in light of the workforce size. Some of the proposed definitions are provided in Table 1.

Table 1

Proposed Definitions of SMEs across MENA

Country	Micro	Small	Medium
Egypt	1 to 4 employees	5 to 14 employees	15 to 49 employees
Lebanon	1 to 9 employees	10 to 49 employees	50 to 99 employees
Oman	1 to 5 employees	6 to 20 employees	21 to 100 employees
Jordan*	1 to 4 employees	5 to 19 employees	20 to 99 employees
UAE	1 to 9 employees	10 to 49 employees	50 to 99 employees
Tunisia	1 to 9 employees	10 to 49 employees	50 to 99 employees

Source: Dababneh R. &Tukan F. (2007). * Department of Statistics (2012)

More specifically, the Jordan National Human Development Report (2011), SMEs with the inclusion of micro enterprises cover enterprises that employ lower than 100 employees (Ministry of Planning and International Cooperation, 2011). The Prime Minister endorsed the industrial SMEs definition in September 2005 as a national standardized definition to be employed in all the governmental departments. The definition reads – small enterprises are those firms that have 10-49 employees and a registered capital of over JD30,000, while medium enterprises have 50-249 employees and a registered capital higher than JD30,000 (Dababneh &Tukan, 2007).

Moreover, the Central Bank of Jordan also provided a definition on 13th January 2011 and it reaffirmed the definition in the SME Guide (2017) that SMEs should not be any of the following companies – public shareholding company, insurance company, brokerage firm, while small businesses should have assets that are lower than JD1 million or annual sales lower than JD1 million, and employees number 5-20. On the other hand, medium companies should have assets between JD1-3 million or annual sales between JD1-3 million, employing workers numbering from 21-100 (Central Bank of Jordan, 2017; Qandah, 2012).

Moreover, according to the Department of Statistics (2012), in its annual industrial survey, small firms have 5-19 employees, while medium ones employ 20-99 employees (Department of Statistics, 2012). It is similar to the definition of the Royal Scientific Society (RSS) in Jordan (Ghezawi, Baker, Qatarneh, Khasawneh & Alluhaymaq, 1989) . In the present study, the definition of SMEs adopted is the one provided by the Jordanian Ministry of Industry and Trade, the Central Bank of Jordan, the Royal Scientific Society (RSS) and Department of statistics where SMEs are firms employing 5-99 workers.

The Issues of SMEs in Jordan

It is evident that SMEs play a key role in bringing about sustainable growth and development as based on the statistics reported by the Ministry of Industry, Trade and Supply (2014a), SMEs constitute 95% of the national economy components and ultimately contributes to 40% of the GDP, and they employ approximately 70% of the employees in the market in Jordan (Ministry of Industry, Trade & Supply, 2014b). On

the other hand, very small enterprises constitute 89.21% of the total number of firms in Jordan, and small ones constitute approximately 8.80%, where 1.67% constituted medium-sized enterprises. SMEs employ 45.2% of the whole labor force in the country (Young Entrepreneur's Association, 2011).

The importance of the entrepreneurship in Jordanian SMEs has been emphasized in Jordan Vision 2025 Plan. According to the plan, there is lack of jobs growth in SMEs compared to their large counterparts, and the job opportunities in the public sector is showing a decline, resulting in privatization programs, and the establishment of government policies in an attempt to minimize the deficit in the country's budget (Ministry of Planning and International Cooperation, 2015).

Moreover, Jordanian SMEs take part in different economic activities like trade, services, manufacturing and agriculture. Based on the report published by the Jordan National Human Development Report (2011), trade and services dominate the SMEs activities constituting 85% of their total activities in 2006 alone. In line with this contention, the trading sector is predominantly composed of SMES, employing approximately 92.7% total employees. The extensive variety of SMEs existing in the trade sector reflects their provision of services to the local market. Such a market is characterized by limited customer demands that enable easy entry, labor-based method, with the focus on small scale personal finances. However, SMEs in the manufacturing sector do not play the same role as the technology and investments level required is dramatically increased (Ministry of Planning and International Cooperation, 2011).

Also, in Jordan, the SMEs sector is not the top contributor of government taxes with the current data showing that almost half of SMEs earn lower than JD5,000 annually and are below the boundary of where sales tax and income are made compulsory (Young Entrepreneur's Association, 2011).

Added to the above, the density of SMEs (enterprises per 1,000 person) in Jordan, is considerable lower compared to the average in lower-middle income countries, and is approximately half of that of higher income ones. The highest concentration is located in Amman, Zarqaa and Irbid governorates and they are the high performers based on human development indicators. Jordanian SMEs are mostly located in Amman, Zarqa and Irbid, with all three constituting more than 86.6% of SMEs – over 80% of the employment in the country, and more than 70% of the population is lower than a third of the geographic area of the country (Ministry of Planning and International Cooperation, 2011). The number of Jordanian SMEs is presented in Table 2 and Table 3 by cities and employees category.

Table 2
Number of SMEs in Jordan by Cities and Employees Category

City	Employees Category		Total	Percentage %
	Small 5-19	Medium 20-99		
Amman	6997	2497	9494	*75.9
Irbid	746	177	923	*7.4
Zarqa	619	191	810	*6.5
Karak	86	43	129	1.0
Aqaba	197	84	281	2.2

APPENDIX A

Ajlun	32	16	48	0.4
Mafrq	119	40	159	1.3
Jarash	69	14	83	0.7
Balqa	239	76	315	2.5
Tafiela	20	10	30	0.2
Ma'an	95	25	120	1.0
Madaba	81	27	108	0.9
Total	9300	3200	12500	100%

Source: Social Security Corporation, (2016). Annual Report 2015. Amman, Jordan.

* The highest percentage of SMEs in governorates of Jordan.

Table 3
Number of SMEs in Jordan by Cities and Employees Category

Cites	Employees Category			Total	Percentage
	Micro 1-4	Small 5-19	Medium 20-99		
Amman	16701	6997	2497	26195	60.7
Irbid	3926	746	177	4849	11.3
Zarqa	2842	619	191	3652	8.5
Sub- Total	23469	11227		34696	80.5
The Rest of the Cities	7122	938	335	8395	19.5
Total	30591	9300	3200	43091	100%

In the context of emerging and developing countries, SMEs are faced with issues relating to negative human capital quality and the lack of institutional capabilities and are hence going through a phase of deficient intellectual capital (Daou et al., 2013). On the basis of Jones and Macpherson's (2006) study, SMEs that operate in mature sectors often do not have the necessary skills and knowledge for the adoption of current management methods and new technologies.

The top significant barriers in Jordan when it comes to employee training in SMEs according to the Jordan Enterprise Development Corporation (JEDCO) are high costs in absolute and relative terms, issues of employee replacement (while the employee is in training), challenges in searching for suitable trainers/courses, and the potential of turnover. The last barrier holds true particularly in cases of general training, where the employee is lured by other employers who can leverage the former's skills at a higher pay (Jordan Enterprise Development Corporation, JEDCO, 2013). In other words, some employers consider it cheaper to hire skilled employees who are already well-trained than providing training to an employee that has had no training. It can thus be inferred that while SMEs act as good job providers, they are not sufficient providers of activities that meet training needs and upgrade their employees' knowledge levels (Al-Mahrouq, 2010).


Moreover, Magableh et al. (2011) stated that SMEs success are different from one country to the next and from one sector to another. In this regard, such factors are categorized into two namely external and internal factors, with the former being supporting economic, social and political environment, funds and legislations

availability, and the existence of active local and international institutions. The latter covers training, entrepreneurship, skills of employees and management.

Prior studies show that the SMEs operation duration from 3 years and above were more capable of displaying innovative performance (Al-Hyari, Al-Weshah & Alnsour, 2012; Ismail et al., 2013; Madhoushi et al., 2011; Wang & Ellinger, 2011). The Department of Statistics (2012) reported that active and operating SMEs numbered 12,698 for 3 years and over (established in the years from 1960-2011).




APPENDIX B – CERTIFICATION OF AUTHORIZED TRANSLATION OFFICE

	<p>مكتب سكاينة للترجمة المعتمدة</p> <p>SUKAINA AUTHORIZED TRANSLATION OFFICE</p>
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TO WHOM IT MY CONCERN

This is to certify that we *Sukaina Authorized Translation Office (SATO)*, located in Jordan, Amman, Jabal Al-Hussein, have translated from English into Arabic the questionnaire entitled **“EXAMINING INNOVATIVE PERFORMANCE AMONGST SMEs IN JORDAN”** for Mr. *Mohd Abdal Karim Hussien Alzuod* who will submit it to the **University Utara Malaysia**.

With Best Regard,



Manager
Sukaina Authorized Translation Office
(SATO)

<p>Amman, Jabal Al-Hussein, (220) Sukaina Bldg. Ground Fl. Tel. 5699077 (3 Lines) - Fax (962-6) 5606552 e-mail: sato@satotranslation.com</p>	<p>عمان - جبل الحسين - (٢٢٠) مجمع سكاينة التجاري - الطابق الأرضي المدخل الغربي - هاتف: ٥٦٩٩٠٧٧ (٣ خطوط) - فاكس: ٥٦٠٦٥٥٢ (٦-٩٦٢)</p>
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APPENDIX C - QUESTIONNAIRE



A STUDY ON INNOVATIVE PERFORMANCE

Dear Participant,

Thank you for agreeing to participate in this research.

I would appreciate it if you could answer the questions carefully as the information you provide will influence the accuracy and the success of this research. It will take no longer than 30 minutes to complete the questionnaire. All answers will be treated with strict confidence and will be used for the purpose of the study only.

If you have any questions regarding this research, you may address them to me at the contact details below.

Thank you for your cooperation and the time taken in answering this questionnaire.

Yours sincerely,
Moh'd Abdal Karim Hussein Alzuod
PhD Candidate
University Utara Malaysia (UUM)
Tel: 0060173909185 (Malaysia)
Tel: 00962772235848 (Jordan)
Email: mzuody@yahoo.com

Respondent ID (for researcher's usage only)

SECTION ONE

DIRECTION: Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by ***circling*** the ***number*** in the range given

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. My company has high percentage of new products in the existing product portfolio	1	2	3	4	5
2. My company has high number of new product / service projects	1	2	3	4	5
3. My company has the ability to introduce new products / services to the market before competitors	1	2	3	4	5
4. My company has introduced innovations for work processes and methods	1	2	3	4	5
5. My company has introduced quality in new products / services	1	2	3	4	5
6. My company has high number of innovations under intellectual property protection	1	2	3	4	5
7. My company has renewing the administrative system and the mind-set that is in line with company's environment	1	2	3	4	5

SECTION TWO

DIRECTION: Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by ***circling*** the ***number*** in the range given

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Our employees have the knowledge and competence	1	2	3	4	5
2. Our workforce have average educational level					
3. Our company support the employees by constantly upgrading their skills and education whenever each of them feels it is necessary	1	2	3	4	5
4. Instead of doing without thinking, our employees can work brightly	1	2	3	4	5
5. Our employees share their experiences and knowledge with their colleagues	1	2	3	4	5
6. Our employees share their creativity with their colleagues	1	2	3	4	5
7. Our company's overall operation procedure is very efficient	1	2	3	4	5
8. Our company quick in responding to the changes	1	2	3	4	5
9. Our company support between different departments	1	2	3	4	5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
10. Our company's systems allow easy information access	1	2	3	4	5
11. Our company's systems and procedures are flexible and efficient	1	2	3	4	5
12. Our company's culture and atmosphere is supportive and comfortable	1	2	3	4	5
13. Our company prides itself on being efficient	1	2	3	4	5
14. A poll of our customers would indicate that they are generally satisfied with our company	1	2	3	4	5
15. Our company thrives on maintaining the most positive value added service of any firm in the industry	1	2	3	4	5
16. Our company emphasizes on our customers' wants and strive to meet with customers	1	2	3	4	5
17. Our company get as much feedback out of our customers as we possibly can under the circumstances	1	2	3	4	5
18. Our company prides itself on being market-oriented	1	2	3	4	5
19. Our company are confident of future with customer	1	2	3	4	5

SECTION THREE

DIRECTION: Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by ***circling*** the ***number*** in the range given

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. My company makes co-operation agreement with other companies, universities, technical colleges, etc	1	2	3	4	5
2. My company is in touch with professionals and expert technicians	1	2	3	4	5
3. My company encourages employees to join formal or informal nets made up by people outside the organization	1	2	3	4	5
4. My company asks employees to attend fairs and exhibitions regularly	1	2	3	4	5
5. My company has a consolidated and resourceful R&D policy	1	2	3	4	5
6. My company has new ideas and approaches on work performance that are experimented continuously	1	2	3	4	5
7. My company has the organizational systems and procedures that support innovation.	1	2	3	4	5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
8. My company informs all members about the aim of the company	1	2	3	4	5
9. My company holds meetings periodically to inform all the employees about the latest innovations in the company	1	2	3	4	5
10. My company has formal mechanisms to guarantee the sharing of the best practices among the different fields of the activity	1	2	3	4	5
11. My company has individuals who take part in several teams or divisions and who also act as links between them	1	2	3	4	5
12. My company has individuals responsible for collecting, assembling, and distributing internally employee's suggestions	1	2	3	4	5
13. In my company, all the members of the organization share the same aim to which they feel committed	1	2	3	4	5
14. In my company, employees share knowledge and experience by talking to each other	1	2	3	4	5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
15. In my company, teamwork is a very common practice	1	2	3	4	5
16. My company develops internal rotation programs so as to facilitate the shifts of the employees from one department or function to another	1	2	3	4	5
17. My company offers other opportunities to learn (visits to other parts of the organization, internal training programs, etc.) so as to make individuals aware of other people or departments' duties	1	2	3	4	5
18. My company has databases to stock its experiences and knowledge so as to be able to use them later on	1	2	3	4	5
19. My company has directories or emails field according to the field they belong to, so as to find an expert on a create issue at any time	1	2	3	4	5
20. My company has up-to-date databases of its clients	1	2	3	4	5
21. My company has access to the organization's data basis and documents through some kind of network (Lotus Notes, Intranet, etc.)	1	2	3	4	5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
22. My company keeps databases up-to-date	1	2	3	4	5
23. My company allows all the employees to have access to the organization's databases	1	2	3	4	5
24. In my company, employees consult the databases	1	2	3	4	5
25. In my company, the codification and knowledge administration system make work easier for the employees	1	2	3	4	5



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SECTION FOUR

DIRECTION: Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by ***circling*** the ***number*** in the range given

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. In my company, new ideas come up all the time	1	2	3	4	5
2. Continuous renewal and innovation are important for my company	1	2	3	4	5
3. Lately my company has launched many new products/ services	1	2	3	4	5
4. My company invests heavily in developing new products / services and business practices	1	2	3	4	5
5. My company often acts before the competitors do	1	2	3	4	5
6. My company aims at being at the forefront of development in our business sector	1	2	3	4	5
7. My company prefers the cautious line of action even if some opportunity might be lost that way	1	2	3	4	5
8. Bold action is necessary to achieve my company's objectives	1	2	3	4	5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
9. In uncertain situations my company is not afraid to take substantial risks	1	2	3	4	5



SECTION FIVE

This part contains background of your company. **Please tick (√)** in the box or write your response in the space provided.

1. Total number of employees: 5-19 ☐ 20-99 ☐

2. Age of Company:

☐ 3 - 5 years

☐ 6 -10 years

☐ > 10 years

3. Ownership of the Company:

☐ Individual

☐ Partnership

☐ Limited Liability

☐ Limited Partnership

☐ Others (Please specify): _____

4. Economic Activity:

☐ Manufacturing

☐ Internal Trade

☐ Construction

☐ Services

☐ Financial, Banks and Insurance

☐ Others (Please specify): _____

THANK YOU FOR YOUR COOPERATION

APPENDIX D- THE ARABIC VERSION OF QUESTIONNAIRE



جامعة أوتارا الماليزية

دراسة حول الأداء الابتكاري

عزيزي المشارك في تعبئة هذا الإستبيان،،،

نود أن نشكرك على موافقتك للمشاركة في هذا البحث.

يرجى الإجابة على الأسئلة بعناية نظرا لأن المعلومات التي ستقدمها ستؤثر على دقة ونجاح هذا البحث. لن تستغرق تعبئة هذه الإستبانة أكثر من (30) دقيقة من وقتك؛ علماً بأن جميع الإجابات سيتم التعامل معها بمنتهى السرية وسيتم استعمالها لغايات هذه الدراسة فقط.

إذا كانت لديك أي أسئلة بشأن هذا البحث، يمكنك توجيهها إلي وفقاً لمعلومات الإتصال أدناه.

نشكرك على تعاونك وعلى وقتك الذي استغرقتة للإجابة على هذه الإستبانة.

المخلص لكم،،،

محمد عبد الكريم

حسين الزيود

طالب دكتوراه

جامعة أوتارا الماليزية

هاتف رقم

0772235848

بريد الكتروني :

mzuody@yahoo.co

m

(لإستعمال الباحث فقط)

الجزء الأول

تعليمات: يرجى قراءة كل هذه البنود وكتابة إذا ما كنت توافق أو لا توافق على كل عبارة منها.
يرجى إختيار الإجابة من خلال وضع دائرة حول الرقم في الحقل الملائم.

أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة	
5	4	3	2	1	1 تمتلك شركتنا نسبة عالية من المنتجات الجديدة في مجموع المنتجات الحالية.
5	4	3	2	1	2 تمتلك شركتنا عددا كبيرا من مشروعات المنتجات/ الخدمات الجديدة.
5	4	3	2	1	3 تتميز شركتنا بقدرتها على تقديم منتجات/ خدمات جديدة للسوق قبل المنافسين لها.
5	4	3	2	1	4 قامت شركتنا بتقديم إبتكارات إبداعية فيما يتعلق بعمليات وأساليب العمل.
5	4	3	2	1	5 قامت شركتنا بتقديم منتجات/ خدمات ذات جودة عالية.
5	4	3	2	1	6 تمتلك شركتنا عددا كبيرا من الإبداعات المبتكرة المشمولة تحت حماية الملكية الفكرية.
5	4	3	2	1	7 قامت شركتنا بتجديد النظام الإداري والقالب الفكري بما يتوافق مع بيئة الشركة.

الجزء الثاني

تعليمات: يرجى قراءة كل هذه البنود وكتابة إذا ما كنت توافق أو لا توافق على كل عبارة منها.
يرجى إختيار الإجابة من خلال وضع دائرة حول الرقم في الحقل الملائم.

لا أوافق بشدة	لا أوافق	محاييد	أوافق	أوافق بشدة	
5	4	3	2	1	1 يتمتع الموظفون لدينا بالمعرفة والكفاءة.
5	4	3	2	1	2 تتمتع القوى العاملة لدينا بمستوى متوسط من التعليم.
5	4	3	2	1	3 تدعم شركتنا الموظفين من خلال الإرتقاء بمهاراتهم وتعليمهم عند شعور أي منهم بالحاجة إلى ذلك.
5	4	3	2	1	4 يعمل الموظفون لدينا بذكاء ولا يعملون بدون تفكير.
5	4	3	2	1	5 يشارك الموظفون لدينا زملاءهم في خبراتهم ومعارفهم.
5	4	3	2	1	6 يشارك الموظفون لدينا زملاءهم في إبداعاتهم.
5	4	3	2	1	7 إن إجراءات العمليات العامة بشركتنا على درجة عالية جدا من الكفاءة.
5	4	3	2	1	8 إن شركتنا سريعة الإستجابة للتغييرات.
5	4	3	2	1	9 إن شركتنا تدعم التعاون بين مختلف الدوائر.
5	4	3	2	1	10 إن أنظمة الشركة لدينا تتيح المجال للوصول إلى المعلومات بسهولة.
5	4	3	2	1	11 تتميز أنظمة الشركة وإجراءاتها بالمرونة والكفاءة.
5	4	3	2	1	12 الثقافة والأجواء العامة بالشركة داعمة

ومريحة.

5	4	3	2	1	13	تفتخر شركتنا بكفاءتها.
5	4	3	2	1	14	إن استطلاع آراء زبائننا يشير إلى أنهم راضون بشكل عام عن شركتنا.
5	4	3	2	1	15	تزدهر شركتنا من خلال الإحتفاظ بخدمات القيمة الإضافية الأكثر إيجابية لأي مؤسسة في هذه الصناعة.
5	4	3	2	1	16	تؤكد شركتنا على احتياجات زبائننا وتسعى جاهدة لعقد لقاءات مع الزبائن.
5	4	3	2	1	17	تحصل شركتنا على أكبر قدر ممكن من التغذية الراجعة من زبائننا بحسب الظروف المتاحة.
5	4	3	2	1	18	تفتخر شركتنا بأنها تتكيف وفقا لظروف وأوضاع السوق.
5	4	3	2	1	19	شركتنا واثقة من المستقبل مع زبائننا.



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الجزء الثالث

تعليمات: يرجى قراءة كل هذه البنود وكتابة إذا ما كنت توافق أو لا توافق على كل عبارة منها.
يرجى إختيار الإجابة من خلال وضع دائرة حول الرقم في الحقل الملائم.

لا أوافق بشدة	لا أوافق	لا أوافق	محايد	أوافق	أوافق بشدة
1	2	3	4	5	1
2	3	4	5	1	2
3	4	5	1	2	3
4	5	1	2	3	4
5	1	2	3	4	5
6	1	2	3	4	5
7	1	2	3	4	5
8	1	2	3	4	5
9	1	2	3	4	5
10	1	2	3	4	5

- 11 هناك أفراد في شركتنا يشاركون في عدد من الفرق أو المجموعات ويقومون أيضا بدور حلقات الوصل بين تلك الفرق والمجموعات.
- 12 هناك أفراد في شركتنا مسؤولون عن جمع وحشد وتوزيع اقتراحات الموظفين داخليا.
- 13 في شركتنا، يشارك جميع أعضاء المنظمة في نفس الهدف الذي يشعرون بالالتزام نحوه.
- 14 في شركتنا، يشارك الموظفون في المعرفة والخبرات من خلال التحدث إلى بعضهم البعض.
- 15 في شركتنا، يعتبر العمل الجماعي ممارسة شائعة جدا.
- 16 تعكف شركتنا على تطوير برامج مناوبات داخلية وذلك لتسهيل انتقال الموظفين من دائرة أو وظيفة إلى أخرى.
- 17 توفر شركتنا فرصا أخرى للتعلم (زيارات لأجزاء أخرى من المنظمة، إلخ) وذلك لتعريف الأفراد بواجبات الأشخاص أو الدوائر الأخرى.
- 18 هناك قواعد بيانات في شركتنا لتخزين خبراتها ومعارفها حتى يتسنى لنا استعمال هذه الخبرات والمعارف لاحقا.
- 19 يوجد لدى شركتنا أدلة أو رسائل بريد إلكتروني يتم حفظها طبقا للمجال الذي تنتمي له وذلك لإيجاد خبير في موضوع إبداعي في أي وقت من الأوقات.
- 20 تمتلك شركتنا قواعد بيانات حديثة عن زبائنها.
- 21 تتمتع شركتنا بقدرتها على الوصول إلى قواعد البيانات والوثائق التابعة للمنظمة من خلال نوع معين من الشبكات (لوتوس

نوتس، إنترنت، إلخ).

22	تحرص شركتنا على تحديث قواعد البيانات دائماً.	1	2	3	4	5
23	تتيح شركتنا المجال لجميع الموظفين للوصول إلى قواعد بيانات المنظمة.	1	2	3	4	5
24	في شركتنا، يقوم الموظفون بالرجوع إلى قواعد البيانات للإستشارة.	1	2	3	4	5
25	في شركتنا، يعمل نظام تصنيف وإدارة المعرفة على تسهيل العمل بالنسبة للموظفين.	1	2	3	4	5



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الجزء الرابع

تعليمات: يرجى قراءة كل هذه البنود وكتابة إذا ما كنت توافق أو لا توافق على كل عبارة منها.
يرجى إختيار الإجابة من خلال وضع دائرة حول الرقم في الحقل الملائم.

لا أوافق بشدة	لا أوافق	لا أوافق	محايد	أوافق	أوافق بشدة
1	2	3	4	5	
1	2	3	4	5	في شركتنا يتم عرض أفكار جديدة طيلة الوقت.
1	2	3	4	5	التجديد والإبداع المستمران مهمان لشركتنا.
1	2	3	4	5	قامت شركتنا مؤخرا بإطلاق العديد من المنتجات/الخدمات الجديدة.
1	2	3	4	5	تقوم شركتنا بالاستثمار بشكل كبير في تطوير منتجات/خدمات وممارسات جديدة في مجال الأعمال.
1	2	3	4	5	تقوم شركتنا غالبا بالتصرف في مجال الأعمال قبل المنافسين لها.
1	2	3	4	5	تهدف شركتنا إلى احتلال موقع الصدارة من حيث التطوير في قطاع أعمالنا.
1	2	3	4	5	تفضل شركتنا انتهاج خط حذر في العمل حتى ولو أدى ذلك إلى فقدان بعض الفرص بتلك الطريقة.
1	2	3	4	5	اتخاذ إجراءات جريئة ضرورية لتحقيق أهداف شركتنا.
1	2	3	4	5	لا تخشى شركتنا من القيام بمجازفات جسيمة في المواقف الغامضة.

الجزء الخامس

هذا الجزء يحتوي معلومات عن شركتكم ، يرجى وضع إشارة (✓) في المربع أو كتابة الجواب في الفراغ المناسب .

1. العدد الكلي للعاملين 19-5 99-20

2. عمر الشركة بالسنوات

5 - 3
 10 - 6
 10 <

3. ملكية وصفة الشركة :

فردية

☐

تضامن

☐

مسؤولية محدودة

☐

توصية بسيطة

☐

أنواع أخرى _____

☐

4. نشاط الشركة الإقتصادي

الصناعات

☐

☐

التجارة الداخلية

☐

البناء

☐

الخدمات

☐

المالية والبنوك والتأمين

☐

أنواع أخرى _____



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شكرا لتعاونكم معنا

APPENDIX E1 - SPSS OUTPUT

APPENDIX E1 – RELIABILITY TEST (PILOT STUDY)

Innovative Performance

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0

- a. Listwise deletion based on all variables in the procedure.
- b.

Reliability Statistics

Cronbach's Alpha	N of Items
.827	7

Item Statistics

	Mean	Std. Deviation	N
1-My company has high percentage of new products in the existing product portfolio	4.10	.845	30
2-My company has high number of new product / service projects	4.07	.828	30
3-My company has the ability to introduce new products / services to the market before competitors	4.13	.860	30
4-My company has introduced innovations for work processes and methods	3.97	1.098	30

5-My company has introduced quality in new products / services	4.27	.450	30
6-My company has high number of innovations under intellectual property protection	1.93	.450	30
7-My company has renewing the administrative system and the mind-set that is in line with company's environment	3.17	1.147	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1-My company has high percentage of new products in the existing product portfolio	21.53	13.085	.591	.801
2-My company has high number of new product / service projects	21.57	12.668	.689	.785
3-My company has the ability to introduce new products / services to the market before competitors	21.50	13.017	.589	.801
4-My company has introduced innovations for work processes and methods	21.67	11.057	.705	.781
5-My company has introduced quality in new products / services	21.37	14.930	.656	.809
6-My company has high number of innovations under intellectual property protection	23.70	16.010	.333	.835

7-My company has renewing the administrative system and the mind-set that is in line with company's environment	22.47	11.361	.612	.804
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Scale Statistics

Mean	Variance	Std. Deviation	N of Items
25.63	17.413	4.173	7

Intellectual Capital**Human Capital****Case Processing Summary**

	N	%
Valid	30	100.0
Cases Excluded ^a	0	.0
Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.831	6

Item Statistics

	Mean	Std. Deviation	N
1-Our employees have the knowledge and competence	4.13	.346	30
2-Our workforce have average educational level	3.40	1.070	30
3-Our company support the employees by constantly upgrading their skills and education whenever each of them feels it is necessary	3.80	.805	30
4-Instead of doing without thinking, our employees can work brightly	3.93	.640	30
5-Our employees share their experiences and knowledge with their colleagues	4.07	.583	30
6-Our employees share their creativity with their colleagues	3.90	.759	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1-Our employees have the knowledge and competence	19.10	8.783	.794	.806
2-Our workforce have average educational level	19.83	6.764	.471	.863

3-Our company support the employees by constantly upgrading their skills and education whenever each of them feels it is necessary	19.43	6.944	.692	.784
4-Instead of doing without thinking, our employees can work brightly	19.30	7.666	.693	.789
5-Our employees share their experiences and knowledge with their colleagues	19.17	7.799	.734	.786
6-Our employees share their creativity with their colleagues	19.33	7.402	.618	.800

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
23.23	10.530	3.245	6

Structural Capital

Case Processing Summary

	N	%
Valid	30	100.0
Cases Excluded ^a	0	.0
Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.819	7

Item Statistics

	Mean	Std. Deviation	N
7-Our company's overall operation procedure is very efficient	3.90	.662	30
8-Our company quick in responding to the changes	4.03	.414	30
9-Our company support between different departments	4.10	.662	30
10-Our company's systems allow easy information access	3.57	.898	30
11-Our company's systems and procedures are flexible and efficient	4.10	.403	30
12-Our company's culture and atmosphere is supportive and comfortable	4.07	.365	30
13-Our company prides itself on being efficient	4.13	.346	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
7-Our company's overall operation procedure is very efficient	24.00	5.793	.433	.821
8-Our company quick in responding to the changes	23.87	6.257	.571	.798

9-Our company support between different departments	23.80	5.131	.681	.772
10-Our company's systems allow easy information access	24.33	4.230	.697	.785
11-Our company's systems and procedures are flexible and efficient	23.80	6.097	.680	.786
12-Our company's culture and atmosphere is supportive and comfortable	23.83	6.557	.492	.809
13-Our company prides itself on being efficient	23.77	6.254	.715	.788

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
27.90	7.610	2.759	7

Customer Capital

Case Processing Summary

	N	%
Valid	30	100.0
Cases Excluded ^a	0	.0
Total	30	100.0

- a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.844	6

Item Statistics

	Mean	Std. Deviation	N
14-A poll of our customers would indicate that they are generally satisfied with our company	4.20	.407	30
15-Our company thrives on maintaining the most positive value added service of any firm in the industry	3.70	.988	30
16-Our company emphasizes on our customers' wants and strive to meet with customers	3.90	.923	30
17-Our company get as much feedback out of our customers as we possibly can under the circumstances	4.13	.434	30
18-Our company prides itself on being market-oriented	4.20	.407	30
19-Our company are confident of future with customer	4.13	.434	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
14-A poll of our customers would indicate that they are generally satisfied with our company	20.07	6.892	.697	.820

15-Our company thrives on maintaining the most positive value added service of any firm in the industry	20.57	4.806	.639	.844
16-Our company emphasizes on our customers' wants and strive to meet with customers	20.37	4.999	.653	.829
17-Our company get as much feedback out of our customers as we possibly can under the circumstances	20.13	6.740	.718	.815
18-Our company prides itself on being market-oriented	20.07	6.616	.844	.802
19-Our company are confident of future with customer	20.13	6.671	.752	.810

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
24.27	8.547	2.924	6

Organizational Learning

Information Acquisition

Case Processing Summary

	N	%
Valid	30	100.0
Cases Excluded ^a	0	.0
Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.796	7

Item Statistics

	Mean	Std. Deviation	N
My company makes co-operation agreement with other companies, universities, technical colleges, etc	2.60	1.070	30
My company is in touch with professionals and expert technicians	4.00	1.050	30
My company encourages employees to join formal or informal nets made up by people outside the organization	3.50	1.280	30
My company asks employees to attend fairs and exhibitions regularly	3.73	1.311	30
My company has a consolidated and resourceful R&D policy	3.27	1.413	30
My company has new ideas and approaches on work performance that are experimented continuously	4.27	.521	30
My company has the organizational systems and procedures that support innovation.	3.80	1.031	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
My company makes co-operation agreement with other companies, universities, technical colleges, etc	22.57	25.633	.126	.835
My company is in touch with professionals and expert technicians	21.17	22.075	.503	.774
My company encourages employees to join formal or informal nets made up by people outside the organization	21.67	19.333	.637	.747
My company asks employees to attend fairs and exhibitions regularly	21.43	17.840	.775	.715
My company has a consolidated and resourceful R&D policy	21.90	19.403	.542	.771
My company has new ideas and approaches on work performance that are experimented continuously	20.90	24.438	.667	.775
My company has the organizational systems and procedures that support innovation.	21.37	20.930	.652	.749

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
25.17	28.144	5.305	7

Information Distribution**Case Processing Summary**

	N	%
Valid	30	100.0
Cases Excluded ^a	0	.0
Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.805	5

Item Statistics

	Mean	Std. Deviation	N
My company informs all members about the aim of the company	3.93	.521	30
My company holds meetings periodically to inform all the employees about the latest innovations in the company	3.27	.944	30

My company has formal mechanisms to guarantee the sharing of the best practices among the different fields of the activity	3.00	.947	30
My company has individuals who take part in several teams or divisions and who also act as links between them	3.37	1.033	30
My company has individuals responsible for collecting, assembling, and distributing internally employee's suggestions	2.83	1.053	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
My company informs all members about the aim of the company	12.47	10.120	.456	.811
My company holds meetings periodically to inform all the employees about the latest innovations in the company	13.13	7.568	.663	.744
My company has formal mechanisms to guarantee the sharing of the best practices among the different fields of the activity	13.40	7.559	.662	.744

My company has individuals who take part in several teams or divisions and who also act as links between them	13.03	7.482	.593	.769
My company has individuals responsible for collecting, assembling, and distributing internally employee's suggestions	13.57	7.220	.632	.756

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
16.40	11.903	3.450	5

Information Interpretation

Case Processing Summary

	N	%
Valid	30	100.0
Cases Excluded ^a	0	.0
Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.814	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
In my company, all the members of the organization share the same aim to which they feel committed	15.30	6.355	.492	.809
In my company, employees share knowledge and experience by talking to each other	15.13	6.533	.803	.759
In my company, teamwork is a very common practice	15.07	6.754	.739	.774
My company develops internal rotation programs so as to facilitate the shifts of the employees from one department or function to another	15.57	5.082	.633	.775
My company offers other opportunities to learn (visits to other parts of the organization, internal training programs, etc.) so as to make individuals aware of other people or departments' duties	15.87	4.533	.675	.771

Item Statistics

	Mean	Std. Deviation	N
In my company, all the members of the organization share the same aim to which they feel committed	3.93	.740	30
In my company, employees share knowledge and experience by talking to each other	4.10	.481	30
In my company, teamwork is a very common practice	4.17	.461	30
My company develops internal rotation programs so as to facilitate the shifts of the employees from one department or function to another	3.67	.959	30
My company offers other opportunities to learn (visits to other parts of the organization, internal training programs, etc.) so as to make individuals aware of other people or departments' duties	3.37	1.066	30

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
19.23	8.737	2.956	5

Organizational Memory

Case Processing Summary

	N	%
Valid	30	100.0
Cases Excluded ^a	0	.0
Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.917	8

Item Statistics

	Mean	Std. Deviation	N
My company has databases to stock its experiences and knowledge so as to be able to use them later on	3.13	1.074	30
My company has directories or emails field according to the field they belong to, so as to find an expert on a create issue at any time	2.57	.898	30
My company has up-to-date databases of its clients	3.23	1.006	30

My company has access to the organization's data basis and documents through some kind of network (Lotus Notes, Intranet, etc.)	2.93	.980	30
My company keeps databases up-to-date	3.53	.937	30
My company allows all the employees to have access to the organization's databases	2.67	.844	30
In my company, employees consult the databases	2.73	1.015	30
In my company, the codification and knowledge administration system make work easier for the employees	3.30	.952	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
My company has databases to stock its experiences and knowledge so as to be able to use them later on	20.97	26.654	.890	.891
My company has directories or emails field according to the field they belong to, so as to find an expert on a create issue at any time	21.53	30.464	.647	.912

My company has up-to-date databases of its clients	20.87	28.533	.757	.903
My company has access to the organization's data basis and documents through some kind of network (Lotus Notes, Intranet, etc.)	21.17	29.454	.683	.909
My company keeps databases up-to-date	20.57	29.909	.672	.910
My company allows all the employees to have access to the organization's databases	21.43	30.806	.657	.911
In my company, employees consult the databases	21.37	28.240	.780	.901
In my company, the codification and knowledge administration system make work easier for the employees	20.80	29.476	.706	.907

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
24.10	37.679	6.138	8

Entrepreneurial Orientation

Case Processing Summary

	N	%
Valid	30	100.0
Cases Excluded ^a	0	.0
Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.802	9

Item Statistics

	Mean	Std. Deviation	N
In my company, new ideas come up all the time	3.93	.583	30
Continuous renewal and innovation are important for my company	4.07	.521	30
Lately my company has launched many new products/ services	3.90	.759	30
My company invests heavily in developing new products / services and business practices	3.63	.850	30
My company often acts before the competitors do	3.73	.828	30
My company aims at being at the forefront of development in our business sector	3.90	.607	30

My company prefers the cautious line of action even if some opportunity might be lost that way	3.93	.583	30
Bold action is necessary to achieve my company's objectives	3.13	1.074	30
In uncertain situations my company is not afraid to take substantial risks	2.13	.434	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
In my company, new ideas come up all the time	28.43	13.978	.425	.791
Continuous renewal and innovation are important for my company	28.30	13.321	.678	.767
Lately my company has launched many new products/ services	28.47	12.533	.570	.772
My company invests heavily in developing new products / services and business practices	28.73	11.099	.768	.739
My company often acts before the competitors do	28.63	11.964	.615	.764
My company aims at being at the forefront of development in our business sector	28.47	13.223	.584	.773

My company prefers the cautious line of action even if some opportunity might be lost that way	28.43	15.082	.165	.816
Bold action is necessary to achieve my company's objectives	29.23	10.806	.596	.773
In uncertain situations my company is not afraid to take substantial risks	30.23	15.840	.041	.821

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
32.37	16.171	4.021	9



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APPENDIX E2-TEST OF NON-RESPONDENT BIAS

Group Statistics					
	Bias	N	Mean	Std. Deviation	Std. Error Mean
Innovative Performance	Early	175	3.6592	.62669	.04864
	Late	150	3.7019	.59674	.04872
Human Capital	Early	175	4.0783	.46191	.03585
	Late	150	4.0422	.47187	.03853
Structural Capital	Early	175	4.0981	.45580	.03538
	Late	150	4.1410	.42937	.03506
Customer Capital	Early	175	3.9930	.45886	.03561
	Late	150	4.0922	.45266	.03696
Information Acquisition	Early	175	3.4836	.75914	.05892
	Late	150	3.5000	.79681	.06506
Information Distribution	Early	175	3.8313	.56007	.04347
	Late	150	3.7920	.63832	.05212
Information Interpretation	Early	175	3.9964	.46265	.03591
	Late	150	3.9613	.41560	.03393
Organizational Memory	Early	175	3.6928	.59506	.04619
	Late	150	3.5925	.72879	.05951
Entrepreneurial Orientation	Early	175	3.6847	.48212	.03742
	Late	150	3.7815	.44115	.03602

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Innovative Performance	Equal variances assumed	.011	.918	-.619	314	.537	-.04270	.06902	-.17849	.09310
	Equal variances not assumed			-.620	313.129	.536	-.04270	.06885	-.17816	.09276
Human Capital	Equal variances assumed	.059	.808	.687	314	.493	.03609	.05257	-.06735	.13953
	Equal variances not assumed			.686	309.319	.493	.03609	.05263	-.06746	.13965
Structural Capital	Equal variances assumed	.009	.923	-.858	314	.392	-.04285	.04996	-.14114	.05545
	Equal variances not assumed			-.860	313.449	.390	-.04285	.04981	-.14084	.05515
Customer Capital	Equal variances assumed	1.295	.588	-1.932	314	.064	-.09925	.05136	-.20031	.00181
	Equal variances not assumed			-1.934	311.581	.064	-.09925	.05133	-.20024	.00174
Information Acquisition	Equal variances assumed	.179	.673	-.187	314	.852	-.01635	.08756	-.18863	.15593
	Equal variances not assumed			-.186	307.096	.852	-.01635	.08777	-.18907	.15636
Information Distribution	Equal variances assumed	2.570	.110	.583	314	.560	.03933	.06742	-.09333	.17198
	Equal variances not assumed			.579	298.127	.563	.03933	.06787	-.09423	.17289
Information Interpretation	Equal variances assumed	.402	.527	.706	314	.481	.03505	.04967	-.06268	.13279
	Equal variances not assumed			.709	313.990	.479	.03505	.04941	-.06216	.13226
Organizational Memory	Equal variances assumed	2.079	.108	1.345	314	.180	.10027	.07456	-.04644	.24698
	Equal variances not assumed			1.331	288.159	.184	.10027	.07533	-.04799	.24853

Entrepreneurial	Equal variances assumed	2.636	.105	-1.854	314	.065	-.09674	.05217	-.19940	.00591
Orientation	Equal variances not assumed			-1.863	313.948	.063	-.09674	.05194	-.19894	.00545



APPENDIX E3 – OUTLIERS TEST

Number of Case	Mahalanobis (χ^2)
82	46.43441
322	40.71227
325	40.71227
323	38.9779
324	34.94701
113	31.72112
129	31.72112
321	30.55285
313	26.81839

Mahalanobis Distance (Hair et al., 2010): $P < 0.001$

Multivariate Outlier = Mahalanobis Distance > Chi-square value

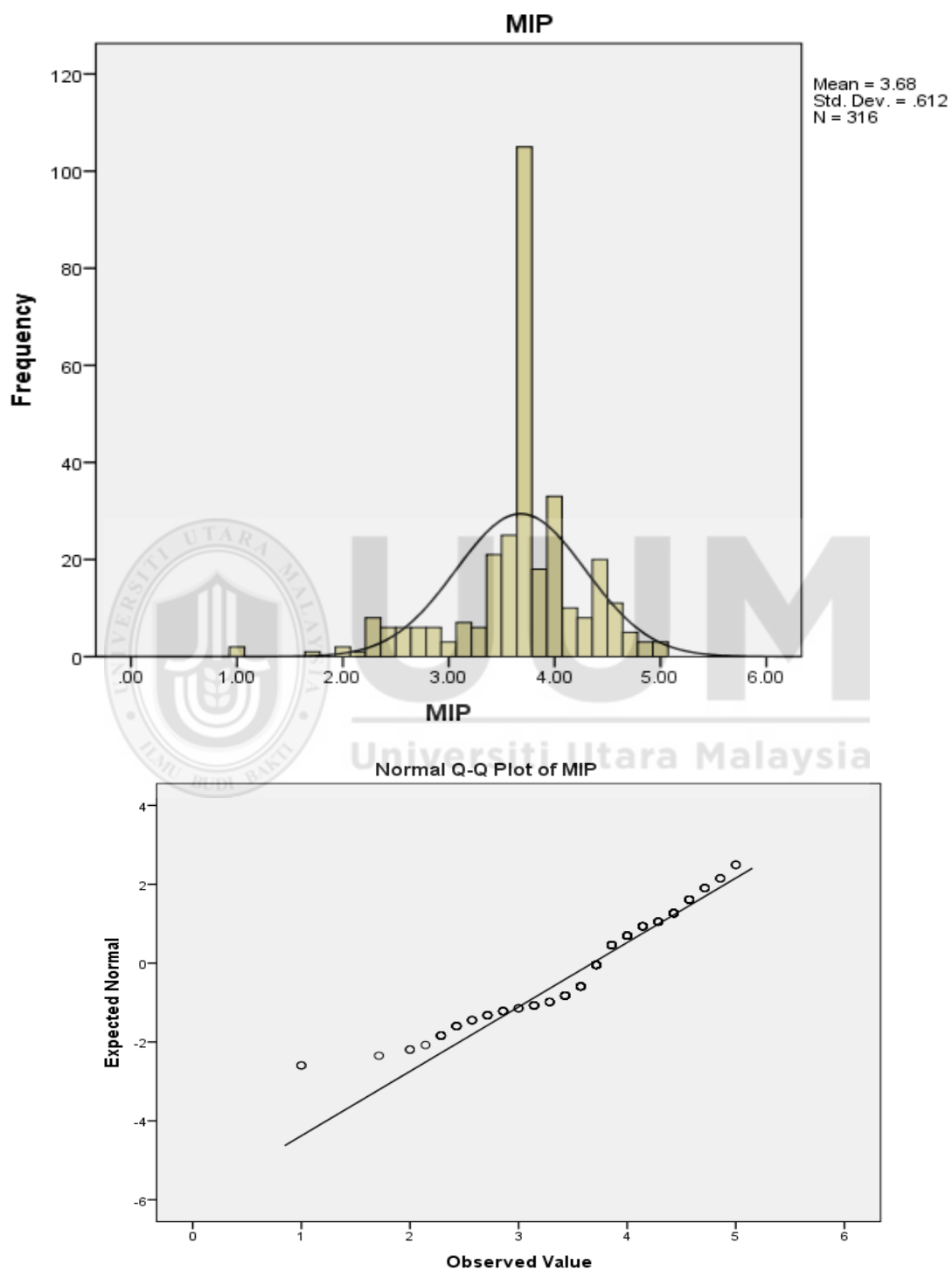
Chi-square Value = $X^2(7, 0.001) = 24.322$ (based on Chi-square table)

APPENDIX E4 - NORMALITY TEST

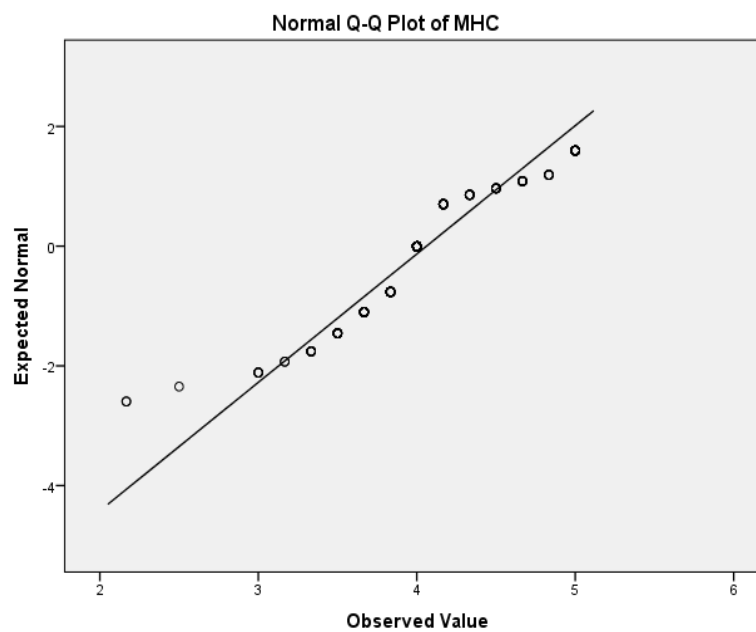
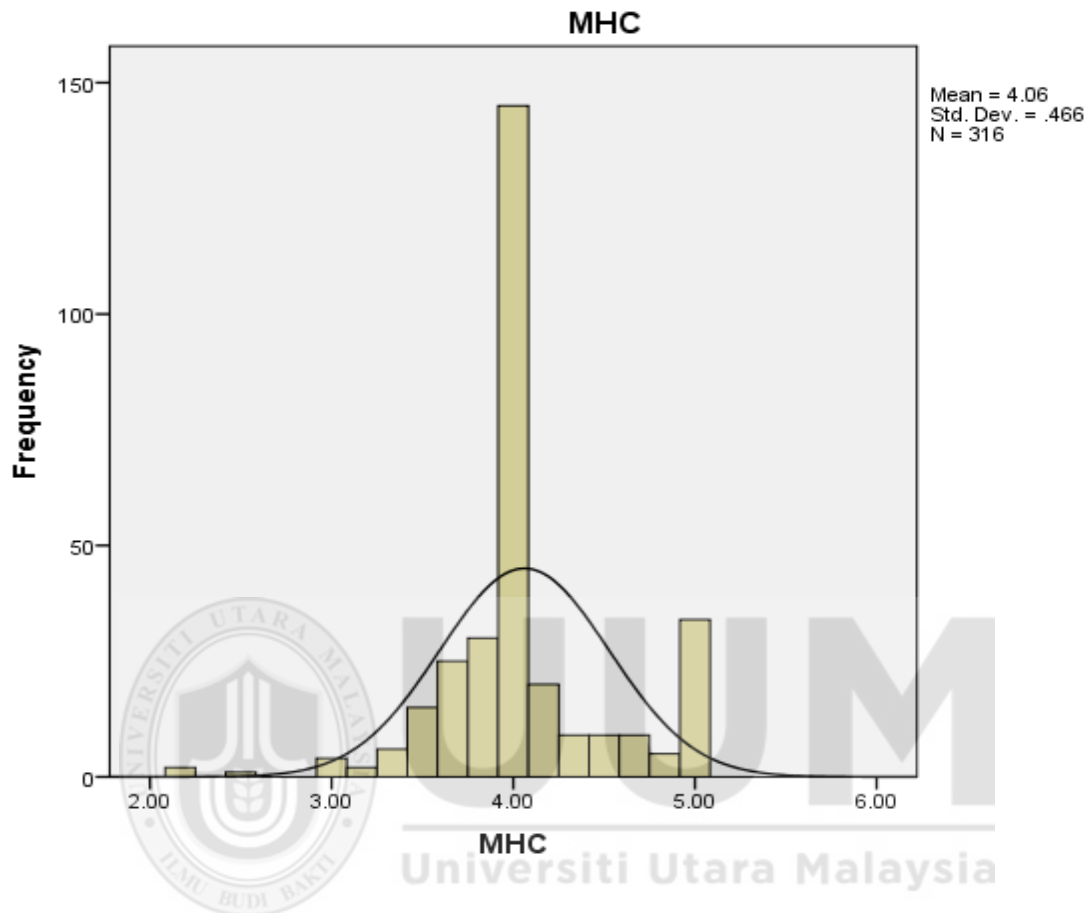
Descriptive Statistics for the Normality

Descriptive Statistics					
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Innovative Performance	316	-1.041	.137	2.473	.273
Human Capital	316	.091	.137	1.880	.273
Structural Capital	316	.021	.137	.343	.273
Customer Capital	316	.250	.137	-.170	.273
Information Acquisition	316	-.105	.137	-.772	.273
Information Distribution	316	-.356	.137	.204	.273
Information Interpretation	316	.337	.137	.782	.273
Organizational Memory	316	-.373	.137	.329	.273
Entrepreneurial Orientation	316	.142	.137	.413	.273
Valid N (listwise)	316				

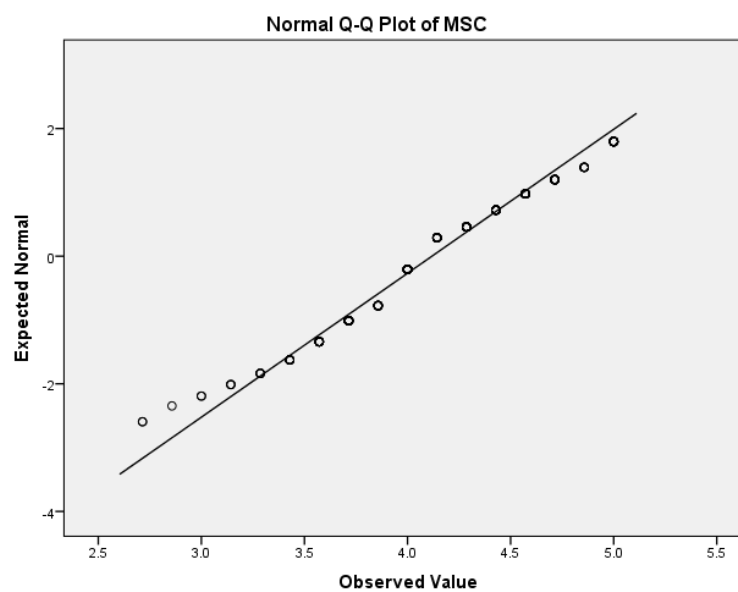
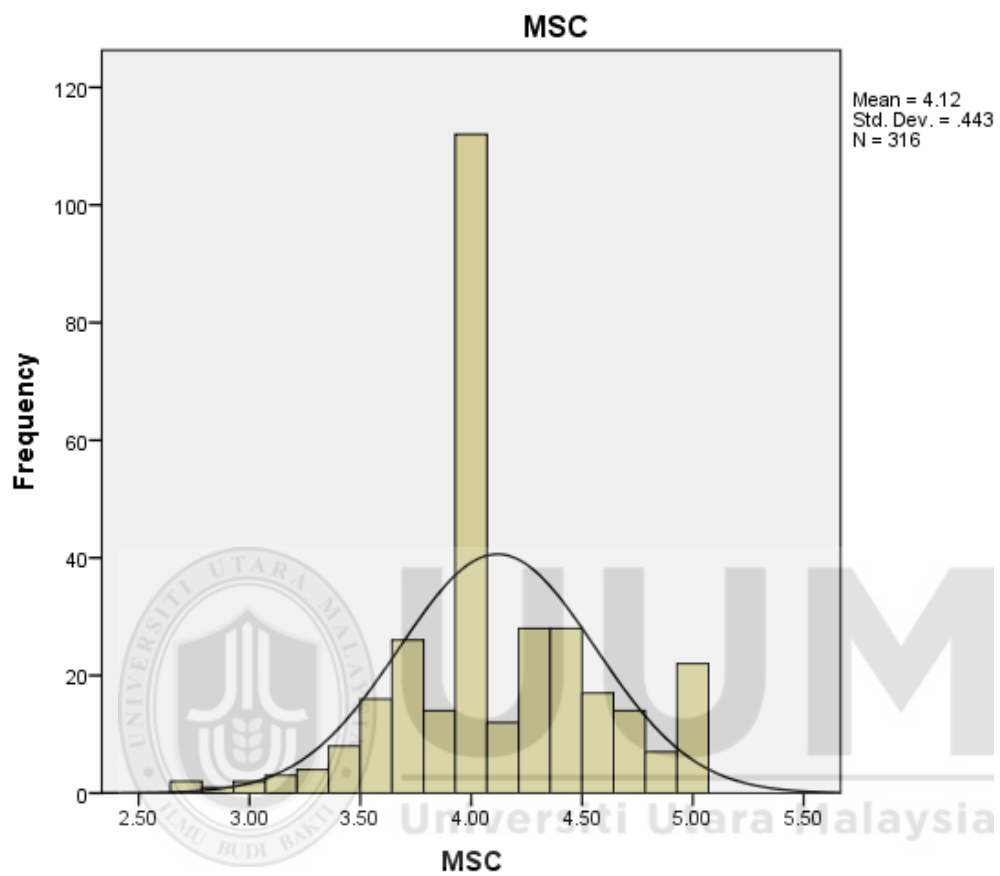
Normality Test (Innovative Performance)



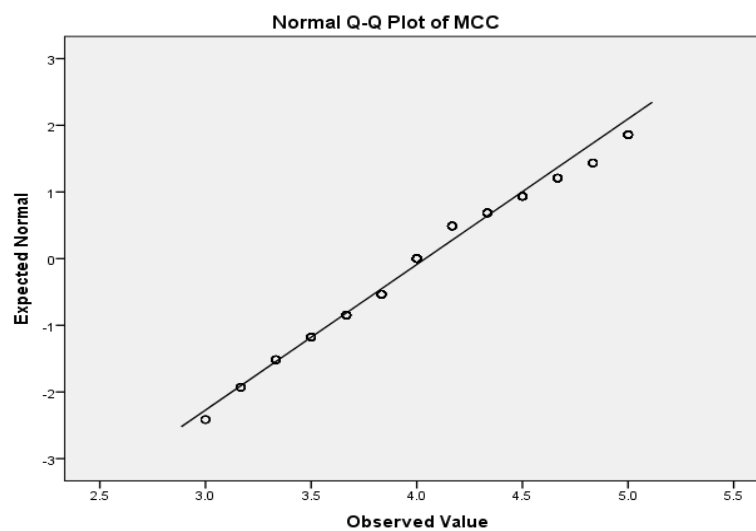
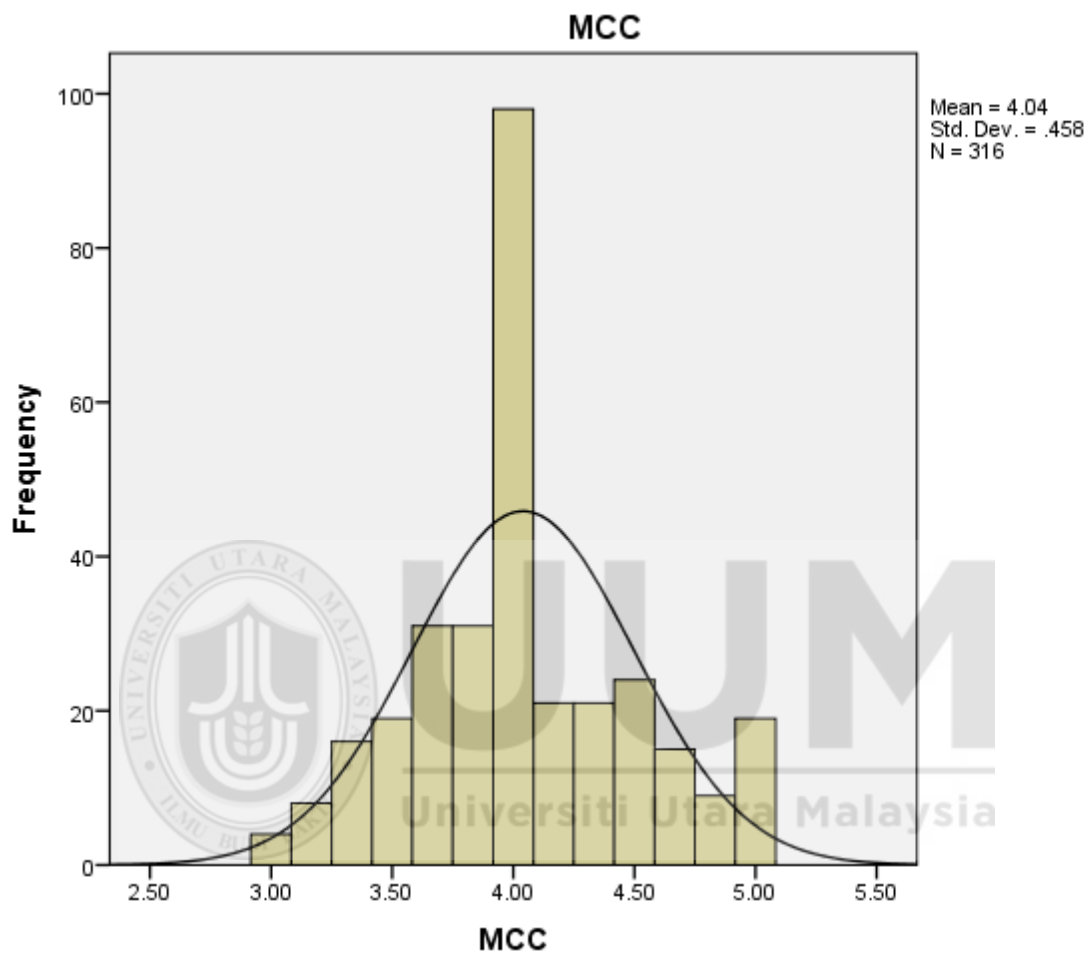
Normality Test (Human Capital)



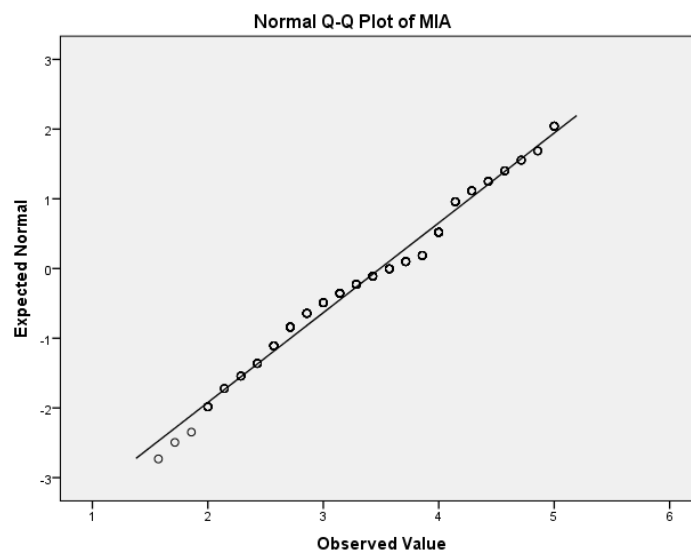
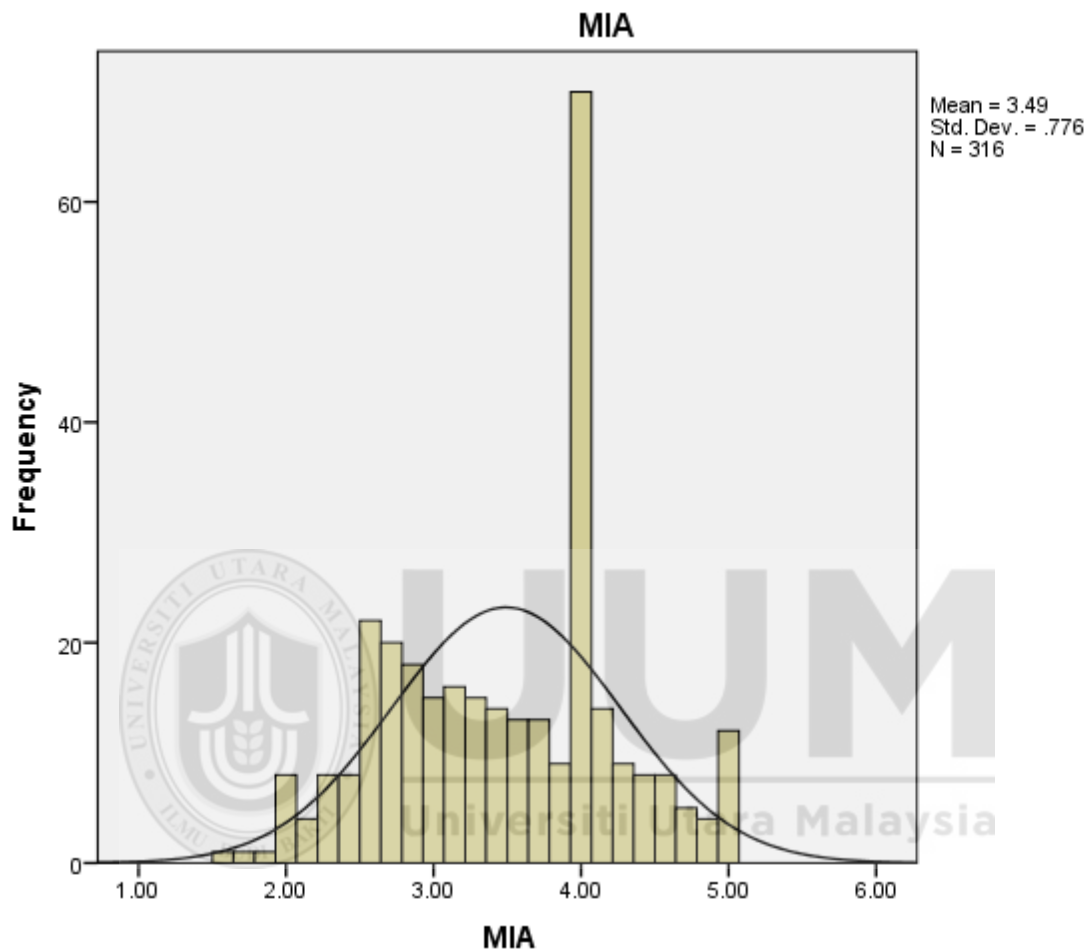
Normality Test (Structural Capital)

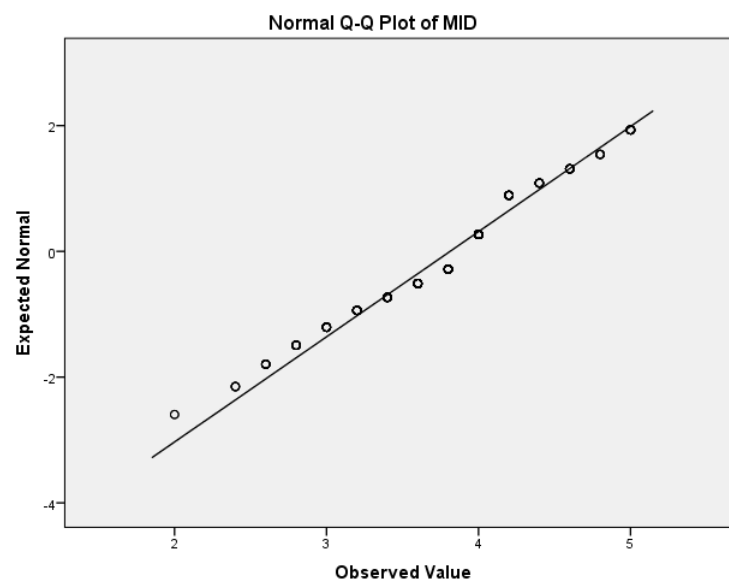
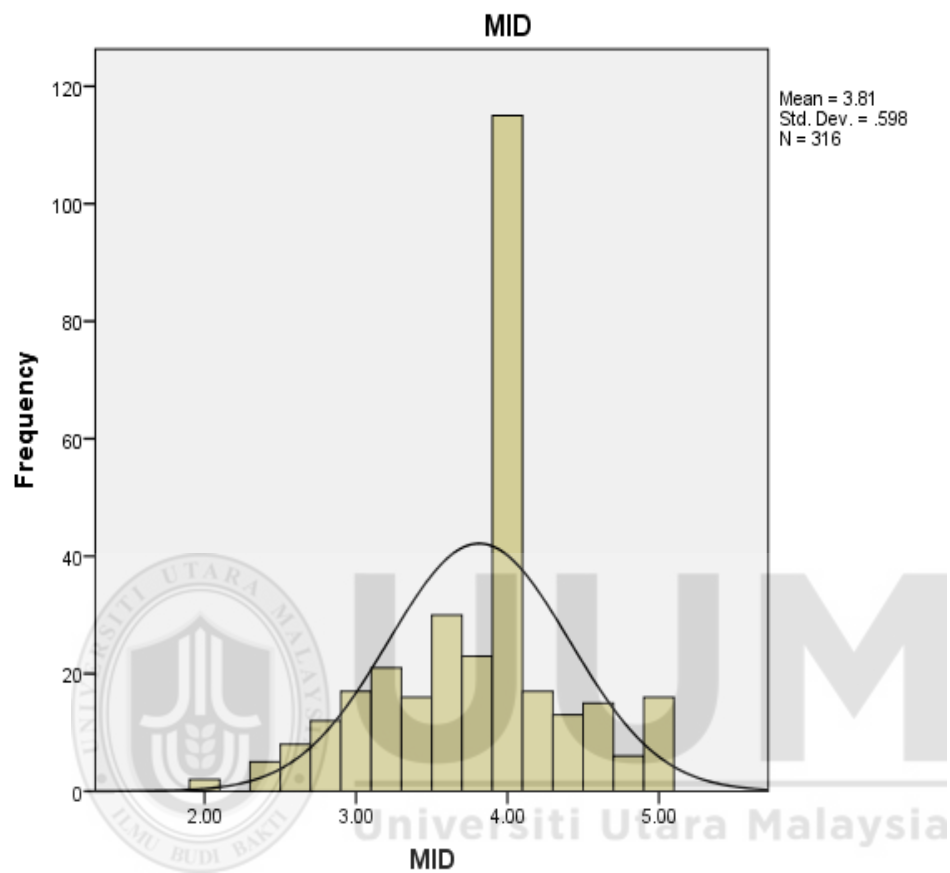


Normality Test (Customer Capital)

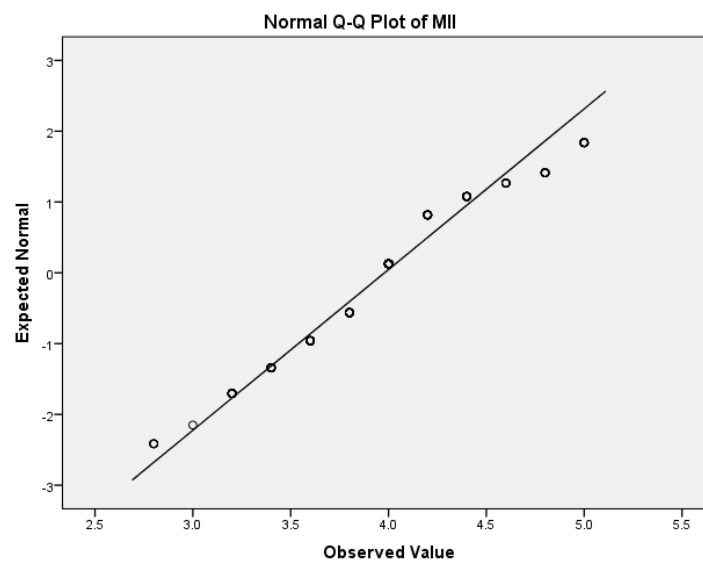
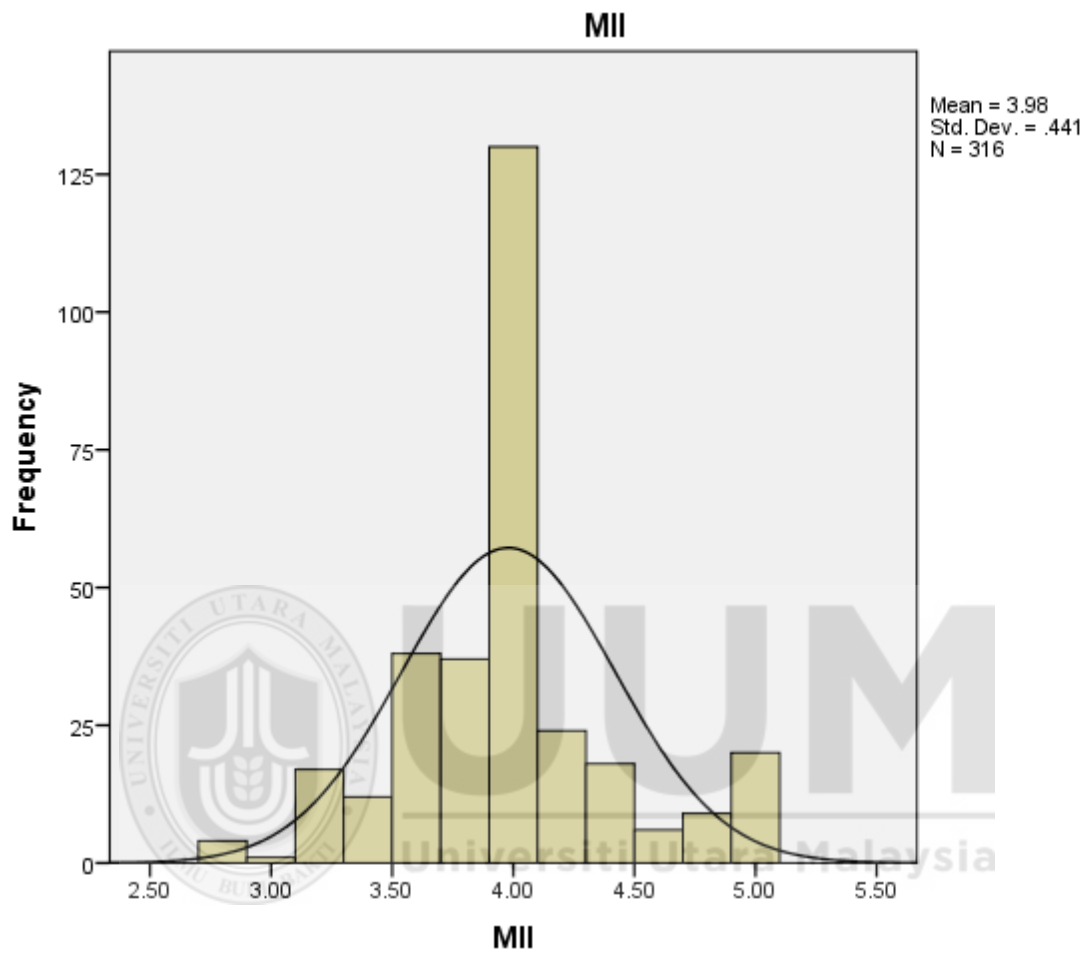


Normality Test (Information Acquisition)

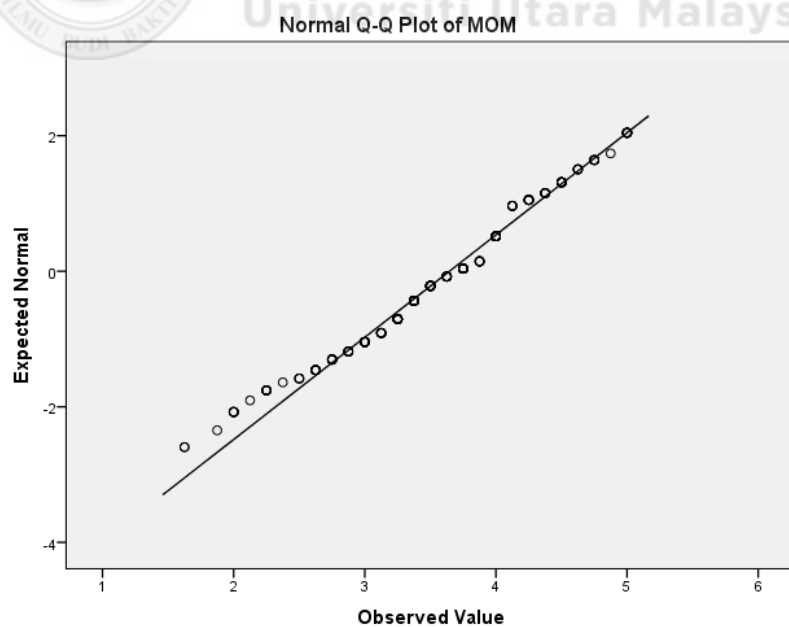
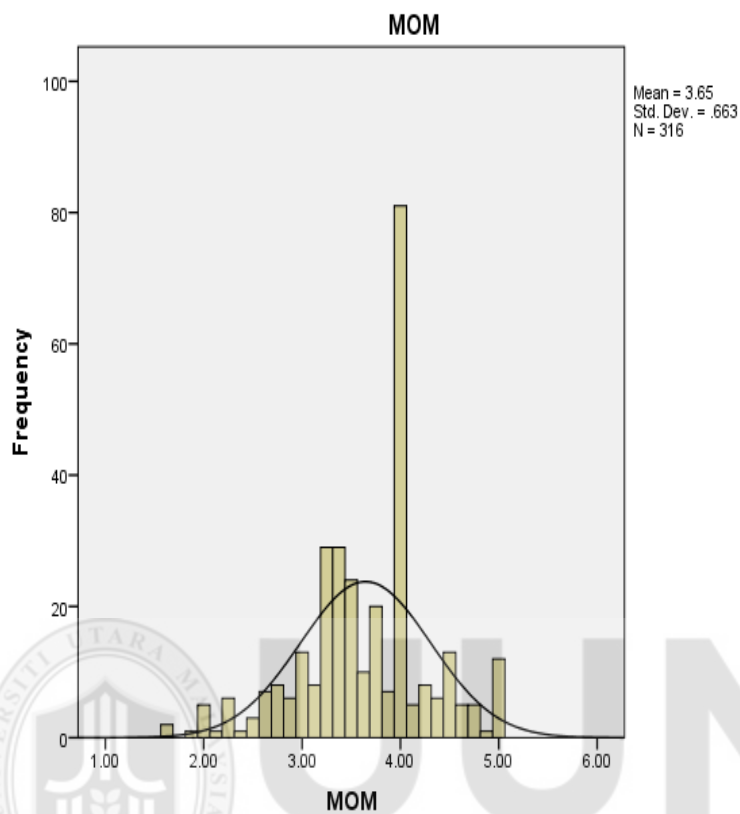


Normality Test (Information Distribution)

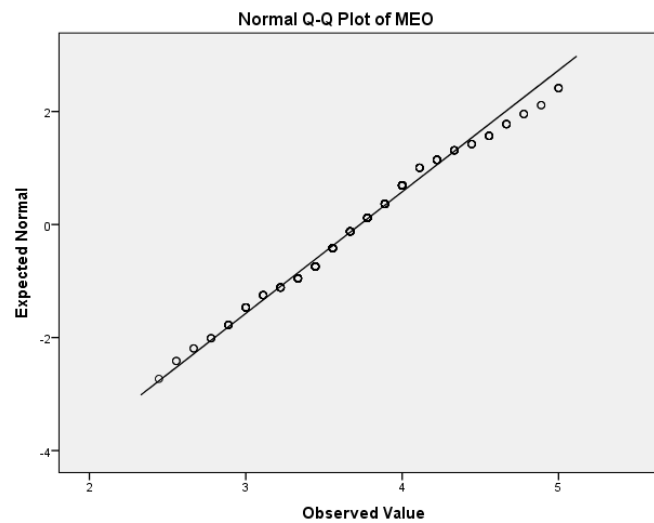
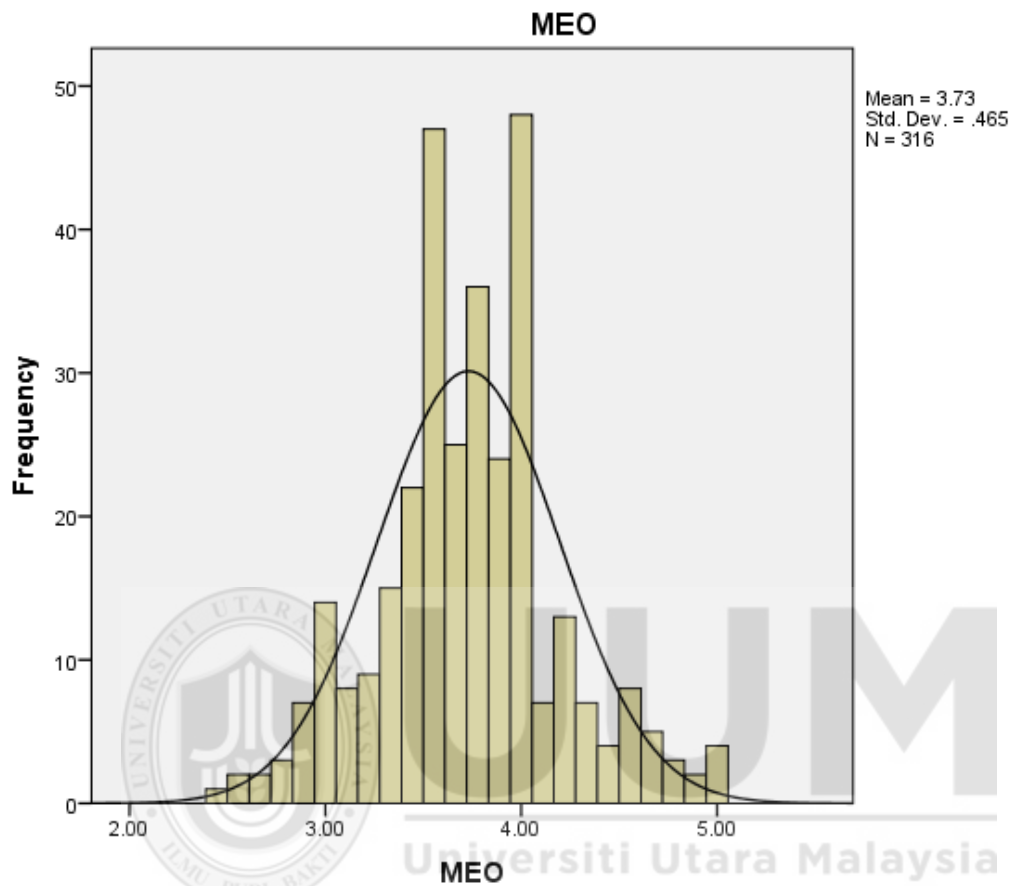
Normality Test (Information Interpretation)



Normality Test (Organizational Memory)



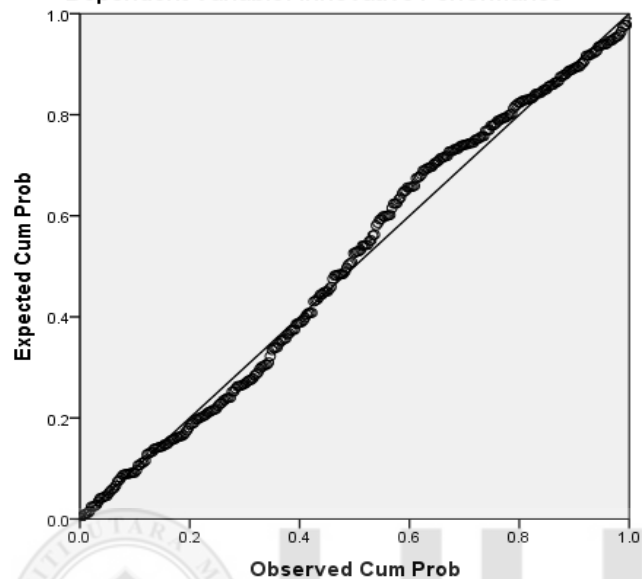
Normality Test (Entrepreneurial Orientation)



APPENDIX E5 – LINEARITY TEST

Normal P-P Plot of Regression Standardized Residual

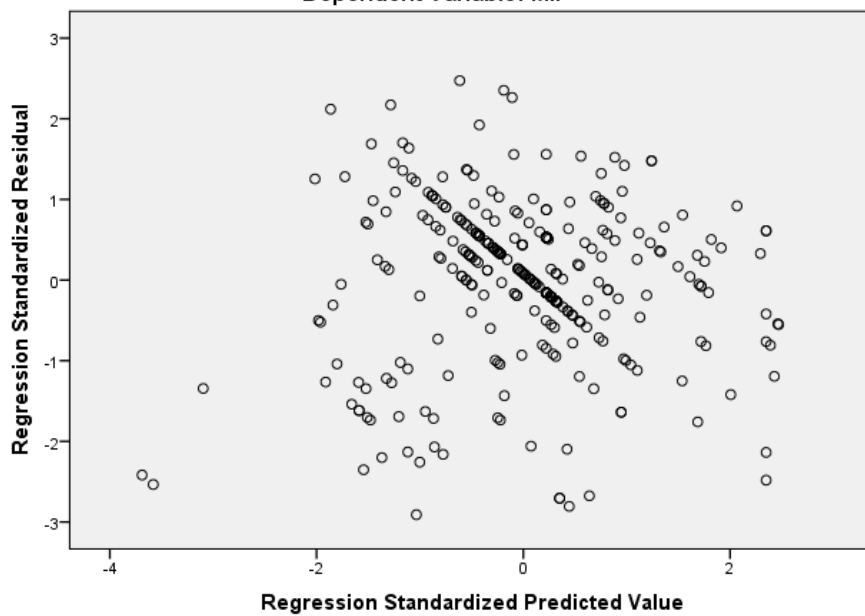
Dependent Variable: Innovative Performance



HOMOSCEDASTICITY TEST

Scatterplot

Dependent Variable: MIP



APPENDIX E6- MULTICOLLINEARITY ASSESSMENT OF TOLERANCE AND VIF VALUES

Multicollinearity Assessment of Tolerance and VIF Values

Variable		Tolerance	VIF
Innovative Performance		.418	2.391
Intellectual Capital	Human Capital	.389	2.571
	Structural Capital	.419	2.384
	Customer Capital	.336	2.977
Organizational Learning	Information Acquisition	.366	2.733
	Information Distribution	.379	2.640
	Information Interpretation	.487	2.054
	Organizational Memory	.336	2.973
Entrepreneurial Orientation		.299	3.348

APPENDIX F- PRE-TEST EXPERTS

List of pre-test experts

No.	Name	University
1	Assoc. Prof. Dr. Abdul Halim Abdul Majid	Universiti Utara Malaysia
2	Assoc. Prof. Dr. Norsiah Mat	Universiti Utara Malaysia
3	Dr. Imad Mohd Almuala	Amman Arab University



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